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ABSTRACT

The process of change in elementary and secondary schools has been the topic of several major studies conducted during the past 15 years. To date, however, information about the change process in different school settings has not been considered comparatively. This document examines and compares the process of change and the role of the change facilitator in the context of both the elementary and the secondary school. After a brief review of significant research, the paper analyzes major variables involved in a change effort and presents case studies to illustrate how these variables work in different settings. A comparative synopsis of the findings suggests that effective change at either the elementary or the high school level requires the following: (1) a leader who sanctions and supports the change; (2) the use of a team of change facilitators; (3) a series of sequential strategies planned around the improvement process; (4) monitoring the system's responses to the implementation strategies; and (5) corrective action if and when the implementation plan strays off target. Four figures are included, and three pages of references are appended. (IW)

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THE FACILITATION OF CHANGE IN ELEMENTARY AND SECONDARY SCHOOLS -- SIMILARITIES, DIFFERENCES, AND INTERACTIONS ABOUT THE PROCESS

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Involved in the process of writing on any topic, is deciding where is the right place to start. This is certainly true when writing about school change. The issue of change, and specifically educational change, is a big one. All sorts of things can be influences on change -- from what the change is to whom the change is impacting to how many changes are going on at once and the interactions between these variables.

This paper is overtly titled -- The Facilitation of Change in Elementary and Secondary Schools. Covertly, however, what we are talking about is what happens to schools in the process of change and what practitioners can do to better structure and facilitate that process. The purpose of this paper is to examine the process of change and the role of the change facilitator in the context of both the elementary and the secondary school. To do so, we are drawing on research experience with many schools involved with different kinds of changes.

The work conducted by the Research on the Improvement Process (RIP) Program over the past decade has allowed a group of researchers to study a

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variety of innovations in various schools across the country. The conceptual basis for this research has been the Concerns Based Adoption Model (Hall, Wallace & Dossett, 1973). To date, however, information about the change process, derived from the separate contexts of elementary and high schools, has not been considered comparatively. This is the major purpose of this paper -- to develop a set of principles which address the issues of the successful school change process in both the elementary and the high school context. Several questions are germane to this task:

1. What is the role of the principal in school change?
2. Who is the second change facilitator and other change facilitators and what is the nature of their roles?
3. What actions and interventions are taken for change?
4. What are the similarities and differences between the two levels of schools in the change process?

The quotation below, from Change Masters, provides one frame from which to begin to answer these questions:

> the tools of change masters are creative and interactive; they have an intellectual, a conceptual, and a cultural aspect. Change masters deal in symbols and visions, and shared understandings as well as the techniques and trappings of their own specialties. (Kanter, 1984, p. 305)

In viewing the change process, we are looking in part at the unique techniques and trappings which change masters in schools employ to influence the system to accept the desired change. An analysis of the way in which these change masters, or facilitators, communicate their vision and put their symbols into action is required for a comparison of a successful change process at the elementary and high school levels.

An outline for the discussion in this paper is as follows: first, a brief history of the ideas and research on change conducted by the CBAM/RIP

research team is presented. Next, based on this background and research conducted, we present an analysis of some of the major variables involved in a change effort. Some of these variables, like roles of facilitators and leaders, types of changes, and units of change, can interact differently in each setting. Others, like the actions for change suggested by the game plan components (GPCs) vary little from setting to setting. Finally, case study examples are presented, illustrating how these variables work in different settings.

A comparative synopsis of the findings about the change process at both the elementary and secondary level suggests that there are general principles which are shared by both school settings. This synopsis then leads to a more generalized framework which can be applied in schools, both elementary and high schools, which are undertaking change. The examples cited are taken from schools participating in our research within the last five years. The point of view taken on change, however, stems from research perspectives that go back nearly fifteen years. The paper begins with a review of that perspective.

THE CBAM MODEL: A Perspective on Change

Research on the process of change began in the 1970's with the tide of Great Society programs and increased Federal interest in the improvement of schools. A major research effort directed at understanding the process of implementing such improvements in schools has been that of the RIP staff at the Research and Development Center for Teacher Education at the University of Texas, Austin. This research is directed at the development of knowledge about and new understandings of the change process and the provision of tools and assistance for practitioners involved with the implementation of change in schools.

The Concerns Based Adoption Model (Hall, Wallace, & Dossett, 1973), evolved out of extensive research on the implementation of educational innovations in schools and college settings. Underlying the CBAM model are a number of basic assumptions (Rutherford, Hall, Huling, 1984):

1) Change is a process, not an event.
2) Change is made by individuals first, i.e., the individual needs to be the primary focus of actions taken for change.
3) Change is a highly personal experience; everyone reacts differently.
4) Change entails developmental growth in feelings and skills; there are identifiable "stages" and "levels" of the change process as experienced by individuals.
5) Change is best understood by individuals when it is presented or described in operation, as it would appear when fully in use.
6) Change can be best facilitated when actions are based on the diagnosed needs of individuals; a client-centered diagnostic/prescriptive model has benefits for both client and facilitator.
7) A change facilitator needs to work in an "adaptive/systematic way," adapting their interventions to the needs of the change and clients within the change. Further, any interventions or actions taken to facilitate change must be directed to individuals first, and innovations second.

Out of this perspective and as a result of ten years of research in schools, the CBAM/RIP program has developed and refined a set of conceptual frameworks for planning, facilitating, monitoring, and evaluating change in schools. The dimensions of the CBAM include:

1) Stages of Concern (SoC), which is used to assess user concerns or

feelings about a change (Newlove & Hall, 1976; Hall, George & Rutherford, 1977);

2) Levels of Use (LoU), which is used to determine the actual extent of use based on behavioral indicators (Loucks, Newlove & Hall, 1976). Both these measures stem from theories of adult development (Fuller, 1969; Fuller, 1973) and extensive testing in the field;

3) Innovation Configurations (IC), which is used to describe the innovation or change (Heck, Stiegelbauer, Hall & Loucks, 1981); and

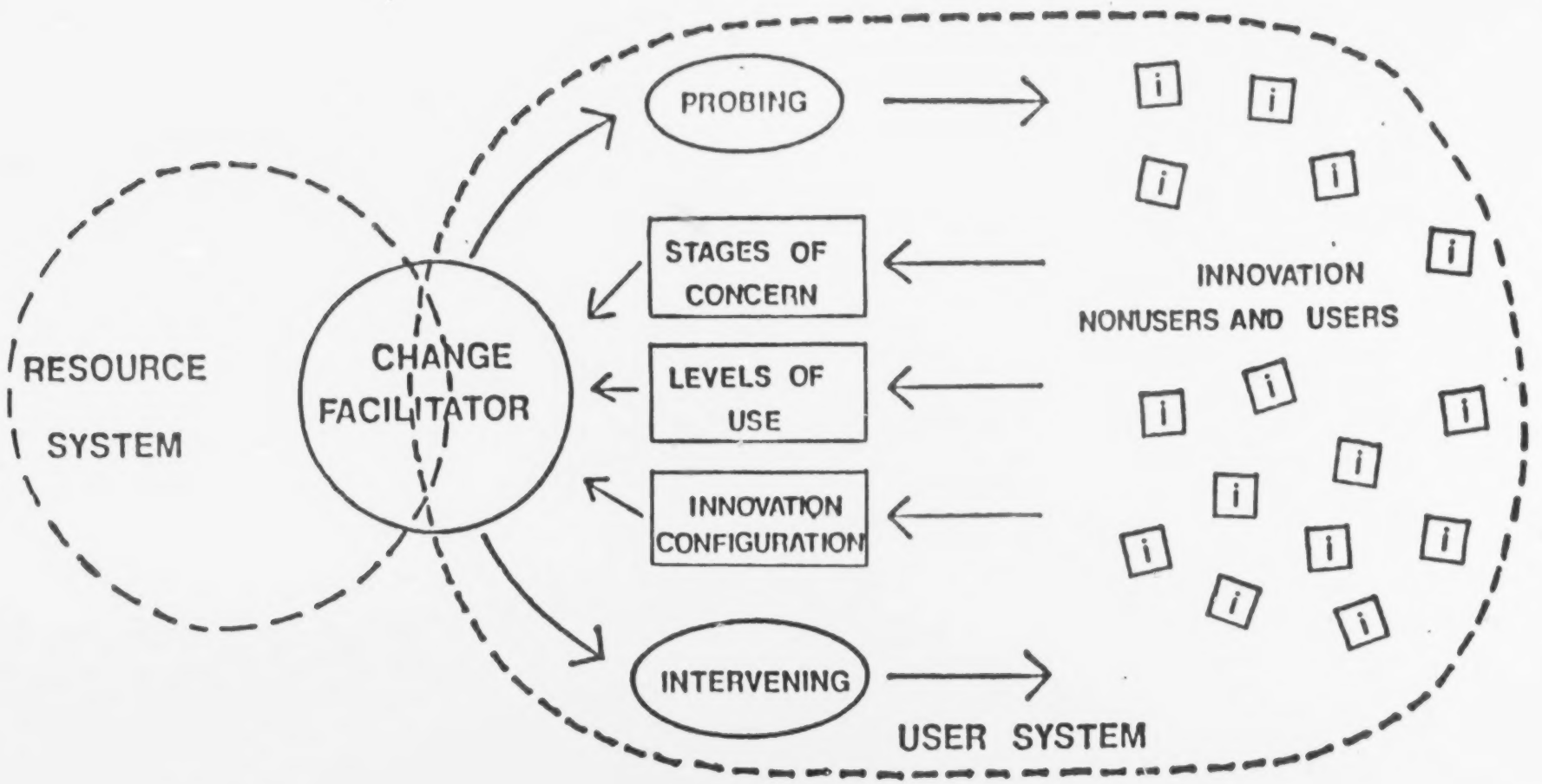
4) the Intervention Taxonomy (IT), which describes and categorizes actions taken by facilitators in implementing or monitoring change (Hall & Hord, 1984).

All of these dimensions are field based and continue to be tested through ongoing research by CBAM/RIP staff, various implementation efforts in schools, and dissertation studies.

A schematic diagram of the model is presented in Figure 1. This diagram takes the position that changes, or innovations, are promoted, or facilitated, by one or more change facilitators, or CFs. These change facilitators work with a target group to whom the change is directed, i.e., the target group is those who are to become the users of the innovation. Facilitation then becomes a result of the interaction between the facilitator(s) and the target group.

The diagnostic dimensions of CBAM -- SoC, LoU, IC -- and the Intervention Taxonomy all represent ways that this interaction can be structured to promote a positive response to the change by the target group. Each dimension provides information about some quality or characteristic of individuals within that group relative to the change. The facilitator can use that information to design interventions that would better meet the needs of the

THE CONCERNS-BASED ADOPTION MODEL



Hall, G. E., Wallace, R. C. & Dossett, W. A. A developmental conceptualization of the adoption process within educational institutions. Austin: Research and Development Center for Teacher Education, The University of Texas, 1973.

FIGURE 1

group. Informal probing can provide information that can be translated into action. Facilitators also have their own resource system that can provide them with ideas and options for facilitation.

The model itself is dynamic in that as the target group changes in response to the innovation and facilitator interventions, the information presented through probing and the diagnostic dimensions also changes, resulting in new actions and interactions. Use of this model is innovation specific, in that the CBAM model represents an interaction for change focused on only one innovation at a time. The interventions suggested by the diagnostic dimensions often exist in the realm of common sense. The value of the model, however, lies in structuring or quantifying such information about the change process in a way that contributes to encouraging the process. The dimensions represented in the model provide ongoing information to change facilitators so they can better plan their actions and monitor progress.

A Model of Interactions for Change

The CBAM model as presented in Figure 1 has been developed to describe kinds of interactions to facilitate change from the point of view of the facilitator and the potential users of the innovation. In a sense, the effectiveness of change efforts might be measured in terms of the quality of the interaction between the users and the facilitators. The change effort is only as "good" as the interaction is "good."

In order to learn more about the characteristics of this interaction, the roles involved in it, and influences on it, the CBAM/RIP program developed two studies focusing on different aspects of the overall model. The first, the Principal-Teacher Interaction Study, investigated the characteristics of facilitators, in particular the principal, working within a single elementary

school unit. The second, the High School Study, took a broader look at the whole system as it responds to change -- including the District Office, teachers and others as facilitators and sources of change, as well as other contextual factors influencing change. The examples used to illustrate points in discussion are taken from these two studies.

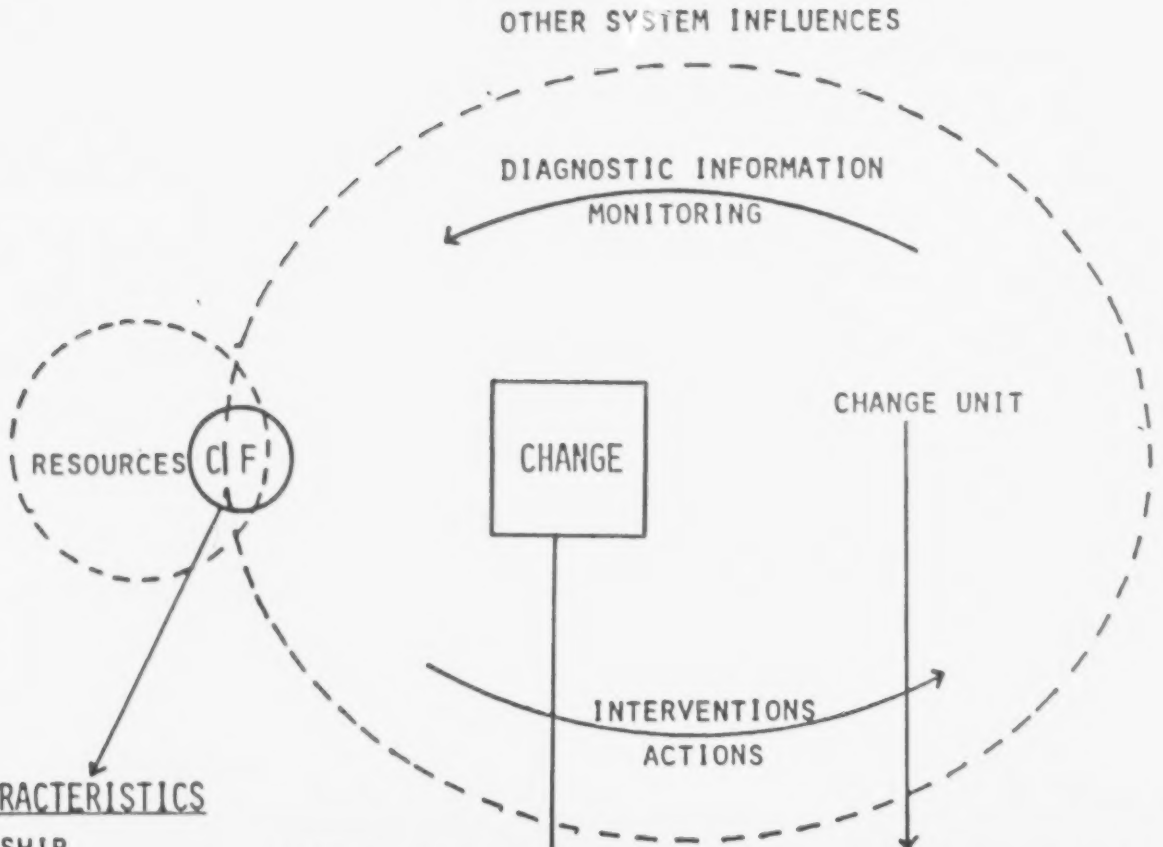
Out of this research came another view of the change process, reflecting the diagnostic-prescriptive model shown in Figure 1, but encompassing the range of variables uncovered in research on diverse settings. This model, shown in Figure 2, presents the issue of interaction for change as one of a selection of options depending on:

1) the characteristics of the change.
2) the characteristics of the target change unit.
3) the characteristics of the facilitators available and responsible, as well as the characteristics of the leadership exercised as part of the process.

Each of these sets may be configured differently at any individual site. Some combinations, however, are more common than others. All of these variables and their role in change will be discussed in later sections.

The following discussion illustrates the change dynamic more simply. The considerations involved in any given change include both its characteristics and the impact they will have on new users and its "raison d'etre" -- reason for being -- the goals involved with introducing it to the system. Any introduction of something new to a system results in some kind of system response. Without a structured plan for introducing and integrating the change into the system, the response factor can delay, modify intended use, or reject the change altogether. This phenomenon can be observed in many kinds

FIGURE 2



CF CHARACTERISTICS

LEADERSHIP
PRIMARY CF
2ND CF
CF TEAM
FLEXIBLE GROUP

PLAN OR STRUCTURE FOR CHANGE

CHANGE CHARACTERISTICS

SOURCE
SIZE AND COMPLEXITY
INNOVATION REQUIREMENTS
GOALS OF CHANGE
FIDELITY

UNIT CHARACTERISTICS

SIZE
ORGANIZATION
HISTORY/PERSONALITY OF GROUP
OTHER PRESSURES

of changes -- from political revolutions to the resistance to acculturation by the indigenous peoples, to the acceptance of new technologies.

In the case of change in schools, the change facilitator has the role and responsibility of mediating the introduction of something new through the interactions they have with users, and through the plans they make to clarify goals and implement the change. In most schools, this means acknowledgment or sanction at the minimum by the principal as gatekeeper, or a formal structuring of roles and responsibilities for a full-fledged effort. The role of the facilitator can be assumed or delegated by the principal depending on the needs of the change, what the change is, its complexity and requirements, and the nature of the target group, i.e., its size, and to some extent, its characteristic responses. In designing actions, the facilitator needs to consider what is known or anticipated about both the change and the target group.

Change as it is represented in this model becomes a matter of "if" this characteristic, "then" these structures or actions. The if-then statement becomes incorporated into the plan for the change. Some of what is appropriate in this equation is represented in what has been learned in the PTI and High School Studies about the characteristics and interactions of each set of variables -- facilitators, changes, and different change units.

BACKGROUND ON THE PTI AND HS STUDIES

The Principal-Teacher Interaction (PTI) Study conducted over the 1980-81 school year, focused on the role of principals as the major facilitator of change in their schools. While the literature on leadership had presented some indicators of what was effective, little research had been done on principals as facilitators of change. What are the day-to-day interactions

and actions taken by principals as facilitators of change. How do they organize an implementation effort? How do they support the use of new practices and encourage teachers? Do all principals do the same thing? If not, what effect do these differences have? Are there other facilitators involved?

With such questions in mind, the PTI Study was conducted with nine elementary school principals involved in implementing a curriculum innovation in their school. Through a combination of data collection methods, including interviews, daily logs, and bi-weekly phone contacts, the daily intervention behaviors of these principals were surveyed over the course of one school year (Hall, Hord, Huling, Rutherford, & Stiegelbauer, 1983). The principals in the study were selected by their district on the basis of district assessment of the principal's change facilitating "style" or characteristic leadership behaviors. Earlier studies had suggested that the principals' "style" might indicate their approach to implementation and its effectiveness (Hall, Rutherford & Griffin, 1982). SoC, LoU, IC and Intervention data were collected from teachers at three points during the year to monitor implementation efforts (Huling, Hall, Hord & Rutherford, 1983). Interviews and observations at regular intervals rounded out the picture of the schools' response to the change (Stiegelbauer, Goldstein & Huling, 1982).

The findings from the PTI study were diverse: 1) Principals did exhibit different "styles" of facilitation and there was a relationship between principal "style" and the effectiveness of implementation efforts (Hall & Rutherford, 1983; Huling, Hall, Hord & Rutherford, 1983). 2) The actions of the principal and others could be categorized in terms of the Intervention Taxonomy (Hall & Hord, 1984) which revealed different "game plans" for change. Further, 3) an analysis of interventions from each school, when considered in

the light of implementation success, suggested the kinds of actions that needed to be taken for effective facilitation. These groupings of actions, called Game Plan Components (GPC's), provided more explicit information about the nature of interventions (Hord, Huling & Stiegelbauer, 1983). 4) Finally, the study showed that in each school, the principal was not the only facilitator. Each school had a second change facilitator (2nd CF) who came to light in the course of more indepth work in the school. This facilitator's role was different from, but complementary to, the role of the principal (Hord, Stiegelbauer & Hall, 1984).

The Principal-Teacher Interaction study provided information about the roles of facilitators, in particular the principal, the nature of their actions contributing to change and the effect of those actions on teachers. Each of the innovations viewed in the study represented a school wide change, requiring the principal to structure efforts to meet the needs of different grade levels and individuals. The unit of change in this study was the whole school. The nature of the interactions for change is described through the portrait of the effort drawn from the qualitative and quantitative data on interventions and their effects, as well as the impressions of research staff collected over the school year (Hall, et al., 1983).

The High School Study, conducted in different phases from 1982-1985, took a broader and more descriptive view of the change process. During Phase I, the 1982-83 school year, one or more staff members visited 12 high schools in Texas, Oregon, Maryland, Indiana, New York and Florida. These exploratory visits were made to become more familiar with the organizational structure of the high schools and the change efforts taking place, and to examine possible sources of information and explore strategies for future data collection efforts (Huling-Austin, 1984). In each visit, school administrators,

department chairpersons, teachers and students were interviewed to gain their insights about how change occurs, what innovations were present, and how to best conduct research on change in high schools. Phase II of the high school study, which occurred during the 1983-84 school year, was a descriptive study designed on the basis of the findings from the previous year. (Hall, et al., 1984) Four major research questions provided the focus for this study:

1. What are the types, sources and purposes of change in high schools?
2. What are the key units (school, department, etc.) of change?
3. What are the situational factors that most influence the change process?
4. How is the change process managed in high schools?

To answer these questions it was deemed important to look at high schools located in different size and type communities and at schools with varying change dynamics, that is, schools with much change and those that were more typical for each district. Community types were rural, urban, suburban and mid-size cities; the high school size varied with the type of community. Nine sites were chosen in 9 states geographically distributed across the nation. At each site 2 high schools were selected as study schools (N=18), one a typical school and the other with much change ongoing.

The third phase involved 2 school districts and in each district 2 high schools and 3 elementary schools. (Rutherford, et al., 1985) The purposes of this phase were:

1. To determine the role of the district office in school change.
2. To compare the change process in elementary and secondary schools.
3. To investigate the management of change over the long term, and
4. To study how leadership affects the change process.

This phase also aimed to revisit some of the elementary schools that participated in the PTI study to see how their implementation efforts had progressed after two years. Special attention was devoted to understanding the role and function of different constituent groups including department chairpersons, district personnel, and teachers in school improvement efforts (Hord & Murphy, 1985). Another goal of Phase III was to draw together the research conducted to date, to bring together the understandings about change in different settings. What about the change process is generic? What is specific to a given setting? How does leadership influence change? What suggestions can we make from all this data that would have value to practitioners?

The High School Study viewed change in terms of the whole system. Taken in all, Phases I, II, and III include data from a total of 30 high schools and 9 elementary schools. Findings from the study include information about the sources and diversity of changes impacting high schools (Rutherford and Huling-Austin, 1984), the nature of leadership for change in high schools (Hall and Guzman, 1984; Huling-Austin, Stiegelbauer and Muscella, 1985; Hord and Murphy, 1985), situational factors influencing change in high schools (Stiegelbauer, 1984; Stiegelbauer, Haddad & Murphy, 1985), the roles and reactions of teachers (Rutherford and Murphy, 1985), and the role and influence of the district office on change in both the high school and elementary school (Hall, Putman and Hord, 1985).

When considered together, the PTI and the High School Study data present a clearer picture of some of the variables associated with change -- the nature of change facilitators, change units, changes themselves, and of the actions taken to facilitate change efforts (see Figure 2). Further, when the data from the PTI and high school studies are considered comparatively, it

suggests that the change process is more alike than different across settings. Based on a comparison of the change process at the two levels, this paper explores the hypothesis that a better understanding of the nature of each of the variables contributes to a theory of the whole of the change process. These data suggest that the process of change is the result of patterned interactions between these variables. The following sections present the parts (of the whole) with examples from schools visited in the PTI and HS Studies. The conclusion of the paper illustrates how these parts were operationalized in four annotated case study descriptions of schools in change.

THE VARIABLES INVOLVED IN CHANGE: CFs, UNITS, AND CHANGE ITSELF

Who Are Change Facilitators?

The word "to facilitate," according to Webster's, means "to make easier." The research conducted in elementary and high school settings showed that there were many different "change facilitators" in the schools -- in many different roles. These roles included principals, assistant principals, department heads, grade level leaders, in-school resource and curriculum specialists, district level curriculum coordinators and resource teachers, even peer teachers. Each of these had a role in facilitation that was related to the kinds of interactions demanded by the change and the setting.

Research also showed that whatever their official title or role, the role played by individuals as change facilitators could be better characterized by the actions and interactions they engaged in within the change process than by their formal designation in the school. For example, the principal is considered to be the "leader" of the school; his or her role is one of leadership. In the case of a change in process, the principal may provide

leadership for the change and become the primary, or first, CF (change facilitator). Alternately, the principal may not have an active role in the facilitation of change and allow another person, perhaps a department head or individual teacher, to assume the role of 1st CF. Alternately again, the principal may delegate the role of 1st CF or create a team of change facilitators with shared responsibility. In many ways the principal represents a special case as a change facilitator because of his importance as a "gatekeeper" and symbolic head of the school. Evidence suggests that the principal's vision for the school and "style" of interaction within change can have important consequences for the success of change efforts (Hall, Rutherford, Hord and Huling, 1984; Rutherford, 1984; Rutherford, Hall & Hord, 1983; Rutherford, Hord, Hall & Huling, 1983; Huling-Austin, Stiegelbauer & Muscella, 1985).

Figure 3 shows some of the roles and role groups involved in the change facilitator. The discussion following illustrates how these different roles are configured. First, what is the nature of change facilitation roles and how do they differ from one another?

The primary, or 1st, CF. The 1st CF is the individual who has major responsibility for facilitating the change. This includes the introduction of the change, managing the change, communicating about the change, and monitoring results and responses of individuals. The 1st CF may be the link the change unit has with others outside the school about the change or the change effort. Depending on the size and complexity of the change, this change facilitator may be the only individual to work with others about the change. If so, that work would include the kinds of activities described for other facilitators that follows. If there is more than one facilitator, however, activities could be shared between facilitators. It is important,

FIGURE 3

CHARACTERISTICS OF CHANGE FACILITATORS

ROLE	WHO	RESPONSIBILITIES
Primary CF	Principal	Sanctions Use
		Communicates Expectations & Goals
	District office person	Structures Facilitation Plan
	Line Administrator	Delegates Responsibilities to Other CFs as Necessary
		Monitors Process Formally
		Provides Push, Resources & Encouragement
		Maintains Leadership in Process
		Models Expectations
Second CF		
	Resource teacher	Credible to Other Teachers
		Communicates Knowledge About Change, Training
	Assistant Principal	Coaches
	Teacher on special assignment	Provides One-to-One Problem Solving, Consultation
		Models Behavior Regarding Change
	District office staff	Monitors for Purpose of Feedback and Correction
	Department Head	Is Liaison Between Change Unit and Primary CF

ROLE	WHO	RESPONSIBILITIES
Second CF (cont'd)	Team Leader	Works With Primary CF to Design and Restructure Plan as Needed
Other CFs		
	Regular teacher	Credible to Other Teachers Communicates With Peers About Change Models Monitors Process for Peer Group Informally Is Representative For Peers To Other CFs About Process
	District consultant	Communicates With School About Change Provides Information, Resources For The Change Is External Consultant to CFs and Teachers Regarding Change or Process

however, that one person take the leadership role and maintain that leadership consistently throughout the change process. The role of the 1st CF/change leader may best be assumed by the principal who can provide the sanction and push necessary to get the change in place.

The Second CF. One surprising finding to come out of the Principal-Teacher Interaction Study was the discovery of a Second Change Facilitator at each school who was involved with implementation (Hord, Stiegelbauer & Hall, 1984a, 1984b). In the PTI schools, the principal was assumed to be the primary facilitator. These second CFs then played a complementary role to that of the principal in the way they involved themselves in the change process. In general, they were more likely to be curriculum specialists, assistant principals, resource teachers, or lead teachers rather than administrative staff. They worked more interactively with teachers involved in the change providing training, consultation and problem solving on an individual basis. They monitored the process for the purpose of corrective feedback and planning rather than for summative evaluation. Further, they often acted as communicators to the primary CF as to the responses of individuals about the change and in order to plan revisions based on those responses. They also communicated to users about plans that involved them or clarified expectations about the change (Stiegelbauer, 1984; Hord, Stiegelbauer & Hall, 1984a, 1984b).

Other CFs. In some schools the role of the change facilitator included persons in closer communication and contact with the teachers involved in the change. In one elementary school where the principal was the primary CF and a district resource person was the second CF, a grade level leader was selected for each grade to work with their own grade level teachers and to be a liaison person with the second CF. As the second CF was external to the school, these

grade level leaders worked with staff to solve problems about the innovation, in this case a curriculum change.

In another district, teacher committees were identified by the principal to work with the second CF (an assistant principal) to plan and act as consultants for the innovation, again a curriculum change. This school, a high school, found that involving teachers in committees focused on some aspect of the change effort was especially beneficial in whole school change efforts. A major function of involving other CFs beyond a second CF would appear to be one of communication and the development of teacher ownership of the change (Huling-Austin, Stiegelbauer & Muscella, 1985).

In still another district, the District Curriculum Coordinator for a new elementary mathematics text served as an external facilitator to the school implementing that innovation. In the school itself, the principal was the primary CF and an in-school curriculum specialist was the Second CF. The District Coordinator provided information to both facilitators about the requirements of the math program and worked with them to develop an implementation plan for the school. She worked with teachers only as requested by the facilitators. The major interventions in the school were done by either the principal or the second CF in coordination with one another.

Leadership Factors for Effective Change

If change is to be effectively accomplished in a school, regardless of level, some factors must be present at the leadership level. There must be clear goals and a commitment to them, enthusiastic support of the innovation or change, high expectations and a clear communication of those to teachers, active involvement in planning, coordinating, and evaluating the implementation effort, active support and assistance to teachers, provision of

necessary resources, including time, needed by teachers to make the change, modeling of what is expected of teachers, care for the personal welfare of teachers, and rewards for teachers who perform well in the change process (Rutherford, Hord, Huling, and Hall, 1983). When there are facilitators in different roles or a team of facilitators, these responsibilities or characteristics might be spread across the facilitators involved. As described in Figure 3, the principal or primary CF provides administrative supports and sanctions, while a second CF attends to one-to-one problem solving and support. Yet each in their own way expresses many of these characteristics essential to effective change.

The potential for the existence of multiple facilitators, however, demands structure and leadership if those facilitators are to be effective in implementing and maintaining the change. Facilitative teams do present many advantages during initial stages of implementation -- they tend to minimize overload on the rest of the organizational system; tasks for a team can be more easily modified than modifying the whole system; and a team can more rapidly communicate to others expectations, goals, and plans for a change than can one or two individuals. All facilitators must, however, be credible to users and administrators alike. They must also be in agreement as to the nature and scope of the change effort, and they must communicate with each other on a regular and frequent basis about the implementation process.

In all of this the principal continues to have a major role. The principal is seen by teachers as a leader in the school. The principal has the resources to structure what is needed for change, even if he delegates major tasks to other facilitators. The choices principals make about structuring change and utilizing (or not) other facilitators may be indicative of their facilitation "style" (Hord, Hall & Stiegelbauer, 1983). "Style"

proved to be an important indicator in the PTI study of how second CFs operated in the school and where they were located, that is, whether they were internal or external to the school. At the high school level, the involvement of different groups and leaders cooperating for change appears to be one way to accommodate for the complexity of the institution and to cross departmental and administrative lines. There, second and third CFs were a useful tool in communicating to user groups and increasing their commitment and knowledge about a change (Huling-Austin, Stiegelbauer & Muscella, 1985).

No one suggestion about facilitation, however, is necessarily the "right" one. The implications from the PTI and HS studies are that there is no one effective strategy for successfully implementing change and no single pattern for providing leadership. Change can occur without the principal but not without some principal sanction, in other words, facilitation does not have to come from administration but usually involves administration in some way. Administrative authority is usually needed to structure, delegate, and organize persons in roles of responsibility. Thus, leadership from a line administrator becomes an imperative both in form and symbol. Further, schools need to decide the best strategy for the change process, based on the personnel available and the size of the effort. This decision is likely to involve the principal in some way, even if the major responsibility for facilitation is elsewhere. The involvement of the principal with teachers about change is likely to have positive benefit for the change overall, if only as an indication of official support (Huling-Austin, Stiegelbauer, & Muscella, 1985).

Who Are the Targets, or Units, of Change?

Any interaction about change involves individuals or sets of individuals who are the targets of the change. These potential "users" respond to the

dictates of the change itself and also to the actions of CFs. Their responses can be measured through the CBAM dimensions of Stages of Concern, Levels of Use, and Innovation Configurations and can provide useful information to a facilitator about how the change might be managed.

The PTI and High School Studies looked at changes that affected different groups or numbers of potential users. If a change involved all or most of the faculty of a school, the unit of change was school-wide. If a change involved one faculty group, such as a department or all sixth grade teachers, then the unit of change became that group, and so on. All of the curriculum innovations studied in the PTI study were school-wide innovations, but there were other innovations in the schools that involved only groups. The High School study had the intention of looking at a variety of types of changes and their target groups, including district-wide, school-wide, and those affecting individuals (Rutherford & Huling-Austin, 1984).

Considering the unit of change and its characteristics has value in planning and structuring change efforts from two perspectives -- 1) the size of the unit, its formal leadership, and the unit's previous experience with similar change which could be important to planning; and 2) the characteristics of teachers as individuals, since their concerns and background can condition their involvement and commitment to the process.

Yet, as the unit of change is largely determined by the change itself, it is difficult to talk about one without the other. The findings in the High School Study revealed that over half of the changes that were reported involved the whole school (54.4 %). Sub-units, such as departments, were involved in 28.6% of the changes listed and individuals as units in 17% of the changes listed (Rutherford & Huling-Austin, 1984). This finding was

surprising to researchers, as popular conceptions of high schools suggest that departments would be the primary unit of change.

As the size of the unit of change increases, the need for formalizing communication, problem-solving, assistance, and monitoring in the change process also increases. Many of the facilitation "teams" and second change facilitators in the High School Study were attempts by the principal or primary facilitator to make the unit of change manageable -- to subdivide it, or to provide small group leadership by using other CFs (Huling-Austin, Stiegelbauer, and Muscella, 1985). This was especially true of whole school change efforts. The facilitative "teams" developed for one change, however, did not necessarily remain the same for another change. Many schools that utilized facilitation teams varied membership on those teams with the changes they were trying to implement. This had the function of involving more teachers in leadership roles and responsibilities.

One example of this is an elementary school, originally in the PTI Study and revisited as a part of the HS Study. This school had a Second CF who was the district facilitator for the innovation. As a result of her use of grade level groups and leaders in that effort, the principal now utilizes a Second CF from within the school and, working with her, divides the school into smaller units, each with some informal head. This becomes a facilitation "team" with the principal and Second CF as the planning and monitoring "head." When last visited, the school had three such teams -- one for writing skills and a school magazine, one for computer literacy, and one for a new reading text. As the teachers in this school were highly self-motivated and ambitious, involvement in roles of responsibility, leadership, and communication enhanced their feelings of ownership in the school.

What Do We Know About Changes Themselves?

In the PTI Study, researchers worked with the schools or district staff to develop a "configuration checklist," an operationalized description of the innovation in order to view the behaviors of teachers throughout the year in relation to the program description (Hall et al., 1982, Heck, Stiegelbauer, Hall & Loucks, 1981). This process allowed the research staff, program developers and facilitators to see how well the program had been understood by teachers in the nine study schools as well as how teacher behaviors changed as they became more practiced with the innovation.

The High School Study examined the types of changes found in the 30 schools throughout the country. By comparison, the PTI study viewed teacher behavior longitudinally relative to one specific change in the school. The changes found in these high schools were grouped by size and complexity as well as by content. Almost all of the changes were in some way directed to the improvement of student achievement, or in response to contemporary demands on schools for knowledge of computers, new business machines, drug awareness, better parenting, etc. The areas of curriculum and administrative planning and organization were the types of changes found in the highest percentages of all types listed. Few changes addressed teacher or administrator behavior or professional development. Fewer still represent major reforms (Rutherford & Huling-Austin, 1984, Rutherford and Murphy, 1985).

Another consideration in viewing the change in high schools was the source or impetus of the change and its relation to teacher response to the change. Of the changes viewed in the HS Study, approximately 71% came from a source other than teachers. These other sources included mainly local school and district administrators, and a few from parents, community, students and contextual factors. When all the known sources were considered, district

administrators accounted for the largest number of changes, followed by collaborative teacher efforts, local school administrators and individual teachers (Rutherford & Murphy, 1985).

Not unexpectedly, teachers were found to respond more positively to bottom up changes (87% by self-report and interview). However, when the changes were top down, teacher reactions were still positive 52% of the time. Also, not unexpectedly, changes that were required received less positive response than changes that were optional. Further, viewing the degree of change in practice required for teachers to accommodate the innovation -- major, moderate, or minor -- also had predictable outcomes. Teachers responded more positively to changes that were minor in degree than major. Further, teachers were more positively inclined to changes not focused on themselves. When changes were targeted to teachers, it drew a lower percentage of positive responses and a higher percentage of negative responses than any other targets. (All data from Rutherford & Murphy, 1985).

Of the five factors considered in teacher response -- source, required or optional, degree, requirements for use, and the target of the change -- the one that drew the greatest reaction from teachers was the source of the change. When the change was initiated by teachers, their reaction was positive 86% of the time, neutral 7% and negative 7% of the time. When the change came from other sources, teachers reacted positively 38% of the time, negatively 22% of the time, were neutral 32% of the time, and had a mixed response 8% of the time. While there may be many reasons for this range of response, it does support the implication that teacher involvement and ownership is an important element in a positive response to change.

Teacher response to change in the PTI Study was measured by the changes in their concerns and levels of use over a year's time. As the PTI Study was

focused on response to one innovation which was being implemented school-wide, teachers' response might be as indicative of the information provided and actions taken by facilitators as it was a response to the characteristics of the innovation itself.

Another significant consideration in viewing the changes, is the clarity of the innovation to teachers. Research done on Innovation Configurations divided innovation descriptions into implementation requirement, those things necessary to begin working with the change -- getting materials ready, providing training -- and the operationalized behaviors involved in becoming a user of the innovation (Heck, Stiegelbauer, Hall & Loucks, 1981). Implementation requires actions directed to both aspects. Often facilitators provide the necessary setup but not the coaching or problem-solving necessary to clarify behaviors needed to make the program work. PTI study data indicated that facilitator interventions in the area of providing organizational supports were consistent across all schools. In schools that were more successful in implementation, these setup activities were balanced by interventions directed to consultation, reinforcement, and problem-solving (Hord, Huling, and Stiegelbauer, 1983). Further, in schools that had greater implementation success, the 1st or 2nd CF worked to enrich or refine teacher understanding of the innovation as use was established over the year. In some schools, this was done by sequentially introducing, clarifying, and practicing with separated components of the change; in others, it was done through problem-solving and consulting with individuals in need of help.

Implementing Change Variables: Important Considerations

The sections above describe some of the variables to be considered in viewing a change process and developing a plan for facilitating that process. In summary, these variables include:

1) Who will be primary leader in the change process?

2) What is the target of the change, what is the size of the unit of change?

3) If the unit is large, what is the best strategy to make it a manageable unit?

4) Who would be best suited for the role of Second CF, given the innovation and the unit of change? In some situations, a curriculum expert for the innovation, if receptive to teachers, might help clarify and work through the innovation; in other situations, a department head or in-school leader, accustomed to working with staff, might better marshall teacher support.

5) Would a facilitation team, involving teachers, be a good idea? If so, who should it include, and how should it be organized and monitored?

6) What is the innovation? What is its source? What do teachers know about it? What kind of concerns do they have about it? How complex is it? How many other changes are going on?

7) What is the best way to provide clarity and reinforcement for the change? Who should define it? How is it best explained to teachers?

All of these considerations are site-specific. Leadership for change includes knowing not only the requirements of the innovation but the characteristics of teaching staff, who might be available and responsible CFs, and strategies for making the change manageable.

The research findings from the PTI and HS Studies point to the principal as having a major role in leadership, especially in changes that involve the whole school. The delegation of responsibilities to other staff, providing

resources, including time for teachers to practice and adapt to it, support and push for the change, involved the principal. In schools where implementation was more successful as determined by data or as nominated by district administrators, the principal had an active role in structuring, supporting, and monitoring the process. Even in schools that were engaging in many changes at many levels, the principal monitored the pulse of each of those efforts.

The next section describes some of the actions taken by facilitators in implementing changes. These actions, or interventions, were found to have a consistent pattern in successful PTI schools, regardless of the innovation or the facilitators. Descriptive data from the high schools supports the hypothesis that this pattern is an important one. Facilitators in high schools also engaged in these same classifications of activities directed to making their changes work.

A CONSTANT IN THE CHANGE PROCESS: INTERVENTIONS

Actions for Change

The purpose of this section is to discuss the actions which change facilitators take in elementary and high schools in the implementation process. In considering actions for change, two major components are discussed: game plan components and system feedback. A general description of the intervention components which change facilitators typically use provides the backdrop for vignettes from both the elementary and the high school. Four brief case studies from elementary and high schools that were part of the PTI and HS research are then presented, illustrating the role and interventions of facilitators who were effective in implementing change.

A Game Plan

Change masters, says Kanter (1984), understand the crucial paradox of the change effort: "there needs to be a plan, and the plan has to acknowledge that it will be departed from." The plan, departure from it, and the restructuring of the plan are the rubric which direct the actions of the change facilitator during the implementation process. The PTI researchers discovered a cyclical pattern in the actions of principals who were "change masters." First, they had a vision of their school which became the plan. The plan was then carried out through the actions they took. Finally, they monitored the effects of these actions to allow for effective restructuring of their plan.

The plan, or game plan, utilized by principals in the PTI study was an overall design for the interventions required to implement the change in their schools. In developing this game plan, these principals considered all aspects of the implementation effort and all persons both directly and indirectly involved with the change effort (Hall, et al., 1983; Rutherford, Hord & Thurber, 1984). In addition, these plans were found to have four major game plan components which directed the principal in providing leadership in activities which supported the teachers in instructional improvement. These specific game plan components, part of the intervention taxonomy developed by the RIP program from PTI and other data, are:

1) developing supportive organizational arrangement,
2) training,
3) providing consultation and reinforcement, and
4) monitoring and evaluating (Hall & Hord, 1984).

When the change facilitator put all four of these game plan components into operation, the likelihood of successful implementation is increased, according to the PTI data (Hall et al., 1983). Figure 4 depicts the game plan components, definitions, descriptors, and examples. The following illustrates these game plan components through vignettes from the PTI and Phase II High School Study:

Developing supportive organizational arrangements are the nuts and bolts of the change process in which the change facilitator keeps the organizational mechanism well-oiled so that the change can work in the system. This game plan component represents the logistical requirements which assure that the organizational mechanism can accommodate the innovation. A high school principal wanted to provide the time for the assistant principals and department heads to assume instructional leadership roles; their time, however, was consumed by paperwork, leaving little time for direct contact with teachers in a facilitative capacity. The principal in this particular high school allocated more instructional support time to this leadership team through streamlining the "administrivia" of the school. She acquired a personal computer system necessary for creating a record management system for routine paperwork. This action by the principal was an organizational arrangement which gave the requisite time to the other members of the leadership team to directly support a new instructional program.

In contrast, an elementary school principal attacked a specific problem by arranging organizational support. In her implementation efforts surrounding a district-sponsored math program, she discovered that teachers were not using the instructional math kits because the kits were neither organized nor coordinated with the scope and sequence of the math program. The principal facilitated use of the math kits by recruiting parent volunteers

FIGURE 4

	DEFINITION	DESCRIPTORS	EXAMPLES
GAME PLAN COMPONENT	GPC's are the six major functional clusters of innovation-related interventions.	Clusters all interventions into functional groupings. Covers the entire time period of the change process. Includes all actors and events. In combination, covers all interventions of the game plan.	
GPC 1: Developing Supportive Organizational Arrangements	Actions taken to develop policies, plan, manage staff, funds, restructure roles and provide space, materials, and resources to establish and maintain use of the innovation.	Covers logistical and scheduling activities. Includes planning and decision-making about the change process, schedules and people.	Hiring new staff. Seeking/receiving funds. Providing innovation-related equipment.
GPC 2: Training	Actions taken to develop positive attitudes, knowledge and skills in relation to innovation use, through formal, structured and/or pre-planned activities.	Covers formal organized training activities. May be provided for users, administrators or others. Is normally scheduled and announced in advance.	Holding workshops. Modeling/demonstrating Observing and providing feedback related to a pre-specified task.

	DEFINITION	DESCRIPTORS	EXAMPLES
GPC 3: Providing Consultation and Reinforcement	Actions (often idiosyncratic, problem-specific, targetted at an individual or small group) taken to encourage and to assist individuals in solving problems related to innovation implementation.	Is focused on consulting and coaching users/ non-users. Is typified by one-on-one problem solving and informal sharing of tips.	Holding brief conversations about how it is going. Facilitating a problem-solving group. Providing "comfort and caring" sessions.
GPC 4: Monitoring & Evaluation	Actions taken to gather, analyze or report data about the implementation and outcomes of a change	Includes formal and informal assessments. Includes assessment, analysis interpretation and feedback.	Analyzing pre-post learner assessments. Administering end-of-workshop questionnaire. Conferencing with teachers to survey how the new program is going.

From Hall and Hord, 1984, 285-286.

to unpack the kits, and providing a substitute teacher so that teachers had additional planning time to coordinate the instructional materials with the program. Through this action, this elementary school principal both solved a logistical problem and facilitated the use of the math materials. Actions by principals which provided the necessary organizational support for the innovation were found in both the elementary and high school studies.

Training is usually a more formal intervention by change facilitators. Typically, it involves workshops or demonstration lessons which are scheduled in advance. Two vignettes from elementary schools provide examples of ways in which effective change facilitators used workshops and demonstration lessons in tandem to support specific innovations in their respective schools. First, a principal in a rapidly expanding elementary school, in supporting and implementing a district-sponsored pupil management program, personally provided the training to the faculty for one hour each week. He gave further support for this weekly training session by observing in the classrooms and modeling the behavioral management techniques to teachers with students. Next, in a West coast elementary school, a principal facilitated the writing program innovation sponsored by the school district. He commissioned a few teachers to attend a district-wide workshop regarding the writing innovation. As a result of teachers' positive response to this workshop, he juggled school resources to bring the workshop leader to the school, which piqued the interest of other members of the faculty during the initial stages of the implementation process. Both of these principals provided support for the innovation by sponsoring workshop and training sessions to meet the specific needs of their schools.

Providing consultation and reinforcement are idiosyncratic actions which the principal or facilitator targets at individual or small groups of users.

These often occur in brief conversations or problem-solving sessions between the change facilitators and individual or small groups of users. It also includes spontaneous actions like conversations in the hallway, a visit to a classroom, or an informal meeting in the teachers' lounge providing consultation and support for teachers' use of the instructional innovation. One effective high school principal describes her ongoing support and consultation with teachers as "high touch." She translates this concept into actions such as circulating in the hallways and teachers' lounge to talk with teachers about instruction. She also drafts handwritten notes to teachers to thank them for a job well done. She feels this ongoing personal touch allows her to have instructional contact with teachers on an ongoing, informal basis which communicates the importance of the instructional program.

A "change master" elementary school principal took actions which supported the district-mandated writing program. He modeled the process of writing by generating his own stories, which he typed in his office. He then visited classrooms to read his stories to children and teachers alike. The principal used his stories as the springboard for conversing with teachers about implementing the writing process in the classroom. Both of these principals were encouragers: they acted in ways which reinforced the use of the innovation, and each in their own way was a consultant to the users.

Monitoring and Evaluating. When a CF conducts formal and informal assessments, such as observing or conferring with teachers, assessing learner outcomes, and administering end-of-workshop questionnaires, he/she is monitoring the effects of his/her actions on the change effort. Often the actions surrounding the monitoring and evaluation of a system are formal procedures. For example, in one high school, both the principal and the assistant principal were responsible for the evaluation of the teachers. They

performed this task twice a year, and after the evaluation, the principal or the assistant principal had a conference with the teacher in which they provided feedback about the instructional program. This was a formal monitoring procedure. However, in another high school setting, during the initial implementation efforts, the principal consulted with the early adopters of the innovation on a frequent basis so that these teachers would serve as models for the later innovation adopters. These early adopters had to resolve many initial problems in making the program work. Monitoring this process allowed the principal to anticipate the needs of other users.

Generally, monitoring and evaluation occur through visiting classrooms, supervising implementation efforts, and by listening carefully to teacher comments and discussion in personal and group interactions. In some instances where there was more than one facilitator, the principal or primary CF would be responsible for more formal monitoring, while the Second CF would monitor the progress of individuals in a formative, problem-solving way. They would use both forms of monitoring to revise their implementation game plan. Having formal and informal processes of monitoring and evaluating available allowed facilitators to continually assess the outcomes of the change effort.

Feedback on the System

As the researchers from the RIP Program analyzed the data from the PTI study, they discovered that the change facilitators (principals and others) who were successful in implementing the change not only had a plan which they translated into actions, but they also restructured their plan when necessary. They accomplished this by obtaining feedback from the system. This feedback is the link between the change facilitator and the ongoing interventions which the change facilitator takes in the implementation effort. Through observations and conversations, the change facilitator receives frequent input

about the change effort. Once they have received this information, there is a period of reflection in which they evaluate the original plan and reformulate if required.

According to intervention theory, facilitators organize and provide for the process, train, reinforce and problem solve, and monitor results. This monitoring may result in retracing steps to retrain or provide other problem-solving activities and monitoring again.

It is the use of this cyclical process which most obviously separates the effective from the ineffective change facilitators. An elementary school principal was implementing a district-mandated school math program. Her initial goal was to implement the entire math curriculum change during the first year; however, on obtaining feedback from observations in classrooms and conversations with the teachers, she found that to have teachers develop objectives for the scope and sequence of the program was a more realistic goal for the first year of implementation efforts. She revised her plan so that adapting the materials to fit the curriculum became a second goal.

An example from a high school is a summer project begun by the principal in order to beautify a decaying inner city school. The initial positive reaction of faculty members, parents, and students to the mural which began to adorn the walls of the school after the first summer, however, helped the program to grow into a whole school beautification program.

Each of these principals understood the rubric of the change process -- planning, acting, and restructuring. In the actions which change facilitators take for change, the critical aspects of having a game plan and obtaining feedback from the system are part of the repertoire of principals who are effective change agents.

The following are brief case studies of change in four schools, two elementary and two secondary. All of these schools were effective in their change efforts. The principal played a major role in each school, either as primary facilitator or through working with a facilitation team. The case study text describes each setting, highlighting the interventions utilized as a part of the plan for change. The annotations to the right provide a complementary sketch of the change process in the school in terms of the change variables discussed in this paper -- facilitator pattern, units of change, and game plan components.

Change in Action: Four Annotated Case Studies

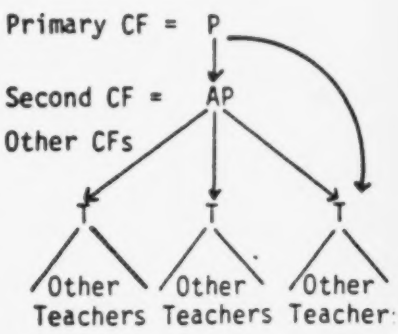
Willow School

Willow is a large, expanding elementary school which serves approximately 800 students in K-6 with a staff of 43 teachers, one principal, and one assistant principal. The community in which the school is located is basically middle class and Anglo. Hispanics comprise 2% of the student population, and Blacks about 15%, most of these students being bussed from inner city. The school is fourteen years old and has been served by the same principal during these years. Tenure of the faculty ranges from 1 to 12 years, with most of the number in the 4-8 year range. There is a general feeling in the school and at the district level that Willow School is a good school with few problems.

KEY

P - Principal
AP - Assistant Principal
DH - Department Head
T - Teacher
S - Student
CF - Change Facilitator
GPC - Game Plan Component

Facilitator Pattern. There are only two formal administrative positions in the school, the principal and the assistant principal. The principal is the visible leader recognized by the faculty. He delegates both responsibility and authority to the assistant principal. Once this basic responsibility is delegated, he does not interfere, but he does monitor and consult relative to task expectations.



For each grade level, there is an informally designated leader and the two principals use these teachers as communication links with other teachers at the various grade levels. However, there is a considerable amount of direct contact between the principals and the teachers. Despite this delegation of responsibility, the principal is the instructional leader in the school.

Change. Two major changes are being implemented at Willow School, and both of these changes are mandated by the district. The first of these is a behavior management program and the second innovation is the new math program. The principal is the primary facilitator for both programs.

Change = Math and Behavior Management Program

Interventions. The principal has a good working knowledge of his faculty. Through classroom observations, discussions with individual teachers, and from other facilitators in the building (assistant principal and informal grade leaders) he knows how teachers teach in their classrooms. The principal does more than collect information about the classroom performance of his teachers. He acts on it, usually in a supportive way.

Unit of Change: Whole School

GPC 3: Consultation & Reinforcement

Arrangements for the in-school math consultant and encouragement for teacher attendance at the district-sponsored math workshops are two ways in which the principal encourages adoption of the math innovation. In another instance, he and the assistant principal investigated a complaint by the teachers regarding the new math program, discovered they were correct, and contacted the district personnel responsible for remedying the problem. In addition, the principal is providing the in-house weekly staff training for the behavior management program.

GPC 1: Supportive Organizational Arrangements

GPC 4: Monitoring Program

GPC 2: Training

Summary

Willow School has an identifiable leader, the principal, who uses the available school resources to facilitate the change process. Among these resources are the key school personnel. He structures the responsibilities for the instructional program so that adequate monitoring and support is available. He uses the critical game plan components in intervening with the staff to facilitate change.

George Washington Carver High School

George Washington Carver High School (GWCHS) is an inner city comprehensive high school with a student population of 2,500 and a faculty of 135. Although the faculty is racially balanced, the student population is 99% black with almost 50% being poor. There is a high mobility rate among the students; however, the staff and the principal have remained relatively stable over the last decade. The school has experienced frequent demographic changes during the last ten years, and it is this phenomenon of community change which underscores the continuing commitment of GWCHS to school improvement.

Facilitator Pattern. The organization flow chart at GWCHS shows the chain of command and the delegation of

responsibilities. Administrative staff and teachers report that there are procedures which all staff follow in both the routine functions and the resolution of problems.

Primary CF = P
+
Second CFs = AP AP
+
Dept Heads = DH
TEAM
Ts

The assistant principals share in the instructional leadership with the principal, while department heads have responsibility for the curriculum planning, budget allocations, and teacher supervision in their respective departments. The leadership team which includes the assistant principals and the department heads meets in regularly scheduled cabinet meetings. However, the school leader is the principal and the assistant principals are second in command.

Change = Academic Achievement and School Beautification Project

Change. Changes at the building level at GWCHS are in response to meeting the needs of the changing student population. The primary goal of the principal at GWCHS is to improve the academic achievement of the students. The specific objective is to decrease the number of students who score below the 50% on standardized achievement tests. This change effort is viewed as an all-school effort, in which all faculty members and administrative leaders share a responsible part.

Unit of Change = Whole School Through DH & Teacher Groups

A tandem effort in the change process to improve academic achievement is the school beautification project, begun several years ago by the principal in response to the poor image of GWCHS, both within and outside the school. As a result of the continued summer efforts of a small cadre of students, faculty and the principals, the halls of the school are dominated by fifteen-foot murals. These murals have become a focal point of the change effort: they serve to motivate staff and students alike for the school beautification project and are the beginning of the principal's long-range vision for the school.

Interventions. There is an underlying structure to the way in which this principal goes about the business of effectively leading the school. Several components are readily apparent in his game plan to accomplish his goal. Among the more salient features of his plan for school improvements are the establishment of policies and procedures, ad hoc change teams, the articulation of goals, and the development and implementation of strategies to accomplish these goals.

Principal Style

The principal's primary goal is to improve the academic achievement of students. He sees this as a long, slow building process; however, he understands that increments of progress must be made each year to actualize his goals. It is his underlying belief which guides the plan. He articulates this belief by stating that students are the school's best asset, and that all students have

the potential to achieve. He adopts a pragmatic approach: the principal states the yearly goal and develops a two-pronged plan. First, he examines the available resources and accentuates the school's strengths in the improvement process. Second, he establishes specific goals which are reachable and attainable. His vision for school improvement becomes a series of utilitarian strategies with defined objectives which can be communicated to staff and students.

GPC 1: Policies & Plans

GPC 1: Communicates Expectations

What are some of the components which he uses in accomplishing his goal? He creates an ad hoc change team comprised of teachers, assistant principals, and other staff members. He selectively marshalls his resources, and he ignores the organizational plan in the implementation process.

GPC 1: Staffing

In the typical day-to-day occurrences in the school, formal procedures are known and followed by both administrators and teachers. Overall, the principal adheres to both district and school policy for managing the school; however, he handles the change process differently. When the principal intends to implement a change, he selectively enlists the support of others. He chooses a small cadre of staff and consults with this group during the change process. It is as if the formal procedures are in place for institutionalized events, but the change process requires a different approach -- the creation of an ad hoc change team.

GPC 1: Delegating and Appointing Roles

GPC 3: Consulting With Staff

Summary. The principal at GWCHS is a contradiction, for he is the push behind the change effort in the school and uses creative insubordination when policy prevents the actualization of his vision for the school. But he is a leader who also considers school policy. The salient characteristic which makes some sense of the contradictions is the principal's vision for the school. He believes that academic achievement is a possibility for all students. It is his plan to accomplish his goals.

It is not possible to describe GWCHS without strong reference to the principal. His role is perhaps best explained when considering the students. They are the focal point of the school and the principal is their primary advocate in that the changes he implements and initiates are for the benefit of students. It is this belief in the role and function of schools which appears to define the principal.

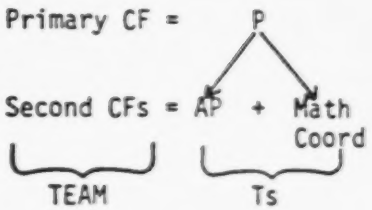
Principal Role

Mimosa

Mimosa Elementary School is located in the southeastern coastal region of the United State in a

large, diverse school district, but serves a primarily middle-class non-minority population. The twenty-six year old building which houses self-contained classrooms and a special education resource room is staffed by 28 faculty members who are veteran teachers. The 550 students are mostly non-minority, middle-class children: approximately 73% of the students are white, 22% are black, 4% Hispanic, and a few are Asian. None of the students are eligible for Title 1 funding; however, a small percentage of students participate in the federally subsidized lunch program. The student population at Mimosa is relatively stable. Students' achievement scores on standardized tests are above the national norm.

Facilitator Pattern. The principal describes herself as a task-oriented manager who delegates responsibilities to the other leadership team members. She monitors the progress of the team on a frequent basis. The team, which is comprised of the principal, assistant principal, and math coordinator, is highly interactive, so it is difficult to assess the origin of ideas. However, it is apparent that the principal is the team leader and that the other team members look to her for advice, guidance, and approval.



The delegation of tasks is often accomplished through discussion and consensus; however, the principal does not delegate responsibilities unless the task is fully discussed and clearly understood. The staff reports that the principal's expectations are clearly understood and that she knows what occurs in the building at all levels.

Change. Change in the Mimosa Elementary School has been mandated by the district office. The unified math curriculum is an example of a mandated change which the school has adopted. The procedures to implement this curriculum, however, have been adapted to meet the needs of the school. It is the process which the Mimosa school uses in implementing the unified math program which demonstrates the way in which change occurs in the school.

Change = Math Program

Unit of Change: Whole School

Interventions. A description which highlights the change process is feedback. The leadership team, strongly influenced by the principal, sought feedback about the degree of program implementation from the staff. They adapted the implementation process to facilitate adoption of the unified math curriculum. They accomplished this through several strategies. First, the principal discovered that the teachers could not implement all program components during the first year. Next, the principal found that the supplemental materials were not used in the program. Through conversations with other members of the team and teachers, she uncovered some organizational problems with the materials. The

GPC 4: Monitoring

GPC 1: Providing Resources

utilization of parent volunteers and a permanent substitute teacher solved this aspect of the problem. Throughout the process of solving the problem of low usage of the supplemental kits in the classroom, the principal continually sought feedback from the other team leaders and teachers. She sought to account for the major concerns of the teaching staff in applying remedies to the problem.

GPC 1: Staffing
GPC 3: Problem Solving & Consultation with Teachers
GPC 4: Monitoring Process
GPC 2: Retraining

Summary. The principal is the push behind the change effort in Mimosa. She is viewed by staff -- administrators and teachers -- as knowing what happens in the school. She sees herself as the instructional leader who relies on a leadership team to work with her in facilitating the school program. The principal expressed no grand schemes for school reform. Rather, she attempted to implement district-mandated programs, but adapted the process of implementation to meet the unique needs of her school. In addition, she saw the facilitation of change as a process which required sensitivity to the needs of the instructional staff for successful and long-term implementation. Her efforts in the change process at Mimosa became a sequence of utilitarian strategies to accomplish the goal of eventually institutionalizing a curriculum innovation.

Principal Role

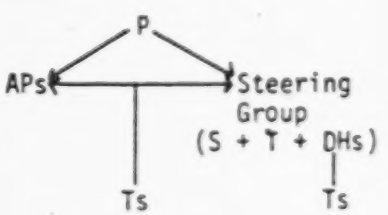
Northside High School

Northside High School is a thirty-year-old school designed originally for a rural population which is now growing at the rate of 200 students a year. The teacher group is a new, younger faculty directed by a principal who has been at the school for two years. The community which Northside serves is a middle-class suburban community of transplanted professional families who are relatively uninvolved in the school.

Facilitator Pattern. The principal has adopted the participatory management program espoused by the school district. The three assistant principals serve as the second change facilitators, and there is a rotating group of students and teacher representatives who serve on advisory committees. However, it is clear that the principal is the school leader who assumes the role of the primary change facilitator. He is supported by a steering committee of teachers and an advisory council of both teachers and students.

Primary CF = P

Second CFs = AP—AP—AP



Change. The change at Northside is the rapid change in the student population. Projected enrollment figures for the district indicate that this school will gain as many as 200 students yearly for the next five years. The district has set as a school priority the development of a structured response system to this increase in students.

Change: Rapid Increase in Student Numbers

One suggestion for this is the use of a participatory management system that would allow for better communication between teachers and administration. The principal not only supports but implements this idea.

Participatory management has taken the form of a student/teacher advisory group and establishing school-home communication. The purpose of this change is to ensure that the academic achievement of the students remains constant despite the continual change in the student body.

Unit of Change: Students, Teachers, Departments, Parents

Interventions. The principal has used both the participatory management and school-community relations as a springboard to effect school change and to maintain academic achievement. He relies on the input from both the faculty steering committee and the student advisory committee to make decisions. He then works with both of these groups in conjunction with the other members of the change facilitation team -- the assistant principals in planning.

GPC 1: Planning

In conferring with teachers, he writes an evaluation of their performance and then asks the teacher to write an evaluation of his principal behaviors. Both evaluations are then used in structuring professional goals and objectives for the teacher and the principal -- all of which hinge on student growth and achievement. Further, he supports teachers' concerns about the change by allowing them access to himself or others in roles of responsibility to express problems. He will discuss and develop a plan for these problems with the steering group and communicate the result to the school or individual rapidly. This has been a significant help in gaining teacher trust in the process.

GPC 4: Monitoring

GPC 3: Listening to Concerns; Consultation with Teachers

GPC 1: Renewal of Plan; Communicates New Plan

Summary. Change at Northside requires almost daily replanning and problem solving. This principal involves some of the individuals the change is affecting most -- teachers and students -- in planning the school's response.

CHANGE IN ELEMENTARY AND SECONDARY SCHOOLS: CONCLUDING COMMENTS

This document provides an overview of many of the key research findings which the RIP team has developed from their studies of change in schools during the last decade of research. Schools successful in implementing change (whether elementary or high schools), had a set of identifiable strategies

targetting the improvement process. A primary change facilitator assumed the major role and responsibility for implementing the innovation. A major part of this person's responsibility was developing a plan of action and marshalling the school's resources to carry out the plan. Through the formation of a change facilitation team, the plan was put into action. This leadership team was comprised of a second change facilitator and unit leaders who carried out the game plan for implementing the innovation. The primary change facilitator acted as the overseer and monitored the system so that the necessary restructuring of the plan could occur. In both elementary and high schools, the successful implementation of an innovation included a cyclical process wherein the primary change facilitator devised a plan, developed strategies to implement the plan, monitored the system's response to the actions surrounding the change effort, and revised the game plan when necessary.

The case study examples illustrate some of these findings. While the case studies include a number of different kinds of innovations, in each case there was a primary facilitator and other facilitators acting to structure and manage the change. These facilitators had slightly different roles depending on whether it was an elementary or secondary school and what the innovation or change was. In Willow School, an elementary school, the second CF was the assistant principal who took on the role of working more closely with teachers to implement the math program. Another important facilitator in that school, however, was the grade level leader, who worked intimately with the second CF to solve problems and consult with other teachers about the innovation. At Northside High School, the school management team worked together to develop a strategy for dealing with the change, an ongoing growth in student population. Implementing that strategy was the role of department heads and assistant

principals who worked within their own groups, or areas of responsibility, to help teachers adjust and accommodate that change. It is difficult to say within this system whether each of these are second CFs for their areas or whether it is the team as a whole that is the second CF. Each, however, worked to fulfill this role in terms of the actions they took with teachers.

Each school cited in the case studies provides examples of the interventions taken by facilitators in implementing the changes they were working with. Regardless of level, elementary or high school, change, or the facilitators involved, comparable kinds of actions were engaged in. Further, these actions fit the game plan components described earlier. While in each school, interventions directed to supportive organizational arrangements, training, and monitoring were present, the consultation and reinforcement interventions proved to be especially important to the success of change in each case. These GPC 3 interventions were typically engaged in by all facilitators, though second CFs in particular had an important role in this area. In George Washington Carver High School, the cadre of staff selected by the principal as an ad hoc change team worked individually and in small groups with teachers to enlist their aid for the school beautification program. In Mimosa Elementary School, the principal consulted with the staff about the usefulness of their materials in order to improve the situation. Both of these actions contributed to gaining staff support for the change.

As these case studies and our research illustrate, the actual process of change and the role and function of the various "actors" in change is more similar than dissimilar in elementary and high schools when it is accomplished in an effective manner. There are, of course, some differences. The size differential between these two schools alters the structure of the change facilitation teams. The departmentalization in the high school typically has

a unit leader in the department head role. This unit leader function often must be created or appointed in the elementary school. The larger size of the high schools often requires more active change facilitators and the construction of more discrete, manageable units in which change may occur.

Finally, this size differential may influence the role of the school principal. At both levels, effective principals must sanction and support the change effort, and they will typically be active and visible facilitators. In larger schools (and many elementary schools are larger than high schools) the principal will likely have more people involved in the leadership team and delegate more responsibilities. Because departments in high schools have a certain degree of autonomy not accorded to units within an elementary school, changes may be initiated and facilitated at that level without direct principal involvement. In elementary schools, the effective principal is more likely to be involved in any and all changes.

Effective change at either the elementary or the high school is guided by several principles.

1. It requires a leader who sanctions and supports the change.
2. It requires the use of a team of change facilitators.
3. It requires a series of sequential strategies planned around the improvement process.
4. It requires monitoring of the system's responses to the implementation strategies.
5. It requires corrective action if and when the implementation plan strays off target.

Accomplishing change, especially complex change in schools, is no easy task.

Research in schools where change has been accomplished successfully suggests that if the above principles are considered, the process of change is more likely to have effective results.

REFERENCES

Fuller, F. F. (1969). Concerns of teachers: A developmental conceptualization (R&D Report #1015). American Educational Research Journal, 6(2), 207-226.

Fuller, F. F. (1973). Teacher education and the psychology of behavior change: A conceptualization of the process of affective change of preservice teachers (R&D Report #2324). Austin: Research and Development Center for Teacher Education, The University of Texas.

Hall, G. E., George, A. A. & Rutherford, W. L. (1977). Measuring stages of concern about the innovation: A manual for use of the SoC questionnaire (R&D Report #3032). Austin: Research and Development Center for Teacher Education, The University of Texas at Austin.

Hall, G. E. & Guzman, F. (1984). Sources of leadership for change in high schools (R&D Report #3185). This paper was presented at the annual meeting of the American Educational Research Association, New Orleans.

Hall, G. E. & Hord, S. M. (1984, March). A framework for analyzing what change facilitators do: The intervention taxonomy (R&D Report #3161). Knowledge: Creation, Diffusion, Utilization, 5(3), 275-307.

Hall, G. E., Hord, S. M., Guzman, F., Huling-Austin, L., Rutherford, W. L. & Stiegelbauer, S. M. (1984). The improvement process in high schools: Form, function, and a few surprises (R&D Report #3188). This symposium was presented at the annual meeting of the American Educational Research Association, New Orleans.

Hall, G. E., Hord, S. M., Huling, L. L., Rutherford, W. L. & Stiegelbauer, S. M. (1983). Leadership variables associated with successful school improvement (R&D Report #3164). This symposium was presented at the annual meeting of the American Educational Research Association, Montreal, Canada.

Hall, G. E., Hord, S. M. & Putman, S. (1985). The role of district office personnel in high school change (R&D Report #3204). This paper was presented at the annual meeting of the American Educational Research Association, Chicago.

Hall, G. E., Hord, S. M., Rutherford, W. L. & Huling, L. L. (1984, March). Change in high schools: Rolling Stones or Asleep at the Wheel? (R&D Report #3175). Educational Leadership, 41(6), 58-62.

Hall, G. E. & Newlove, B. W. (1976). A manual for assessing open-ended statements of concern about an innovation (R&D Report #3029). Austin: Research and Development Center for Teacher Education, The University of Texas.

Hall, G. E. & Rutherford, W. L. (1983). Three change facilitator styles: How principals affect improvement efforts (R&D Report #3155). Austin: Research and Development Center for Teacher Education, The University of Texas at Austin.

Hall, G. E., Rutherford, W. L. & Griffin, T. H. (1982). Three change facilitator styles: Some indicators and a proposed framework (R&D Report #3134). This paper was presented at the annual meeting of the American Educational Research Association, New York.

Hall, G. E., Wallace, R. C., Jr. & Dossett, W. A. (1973). A developmental conceptualization of the adoption process within educational institutions (R&D Report #3006). Austin: Research and Development Center for Teacher Education, The University of Texas at Austin.

Heck, S., Stiegelbauer, S. M., Hall, G. E. & Loucks, S. F. (1981). Measuring innovation configurations: Procedures and applications (R&D Report #3108). Austin: Research and Development Center for Teacher Education, University of Texas at Austin.

Hord, S. M., Hall, G. E. & Stiegelbauer, S. M. (1983). Principals don't do it alone: The role of the consigliere (R&D Report #3158). Austin: Research and Development Center for Teacher Education, The University of Texas at Austin.

Hord, S. M., Huling, L. L. & Stiegelbauer, S. (1983). Analysis of interventions in school improvement efforts (R&D Report #3156). This paper was presented at the annual meeting of the American Educational Research Association, Montreal, Canada.

Hord, S. M. & Murphy, S. C. (1985, April). The high school department head: Powerful or powerless in guiding change? (R&D Report #3210). Paper presented at the annual meeting of the American Educational Research Association, Chicago.

Hord, S. M., Stiegelbauer, S. M. & Hall, G. E. (1984a, November). How principals work with other change facilitators (R&D Report #3179). Education and Urban Society, 17(1), 89-109.

Hord, S. M., Stiegelbauer, S. M. & Hall, G. E. (1984b, September-December). Principals don't do it alone: Researchers discover second change facilitator active in school improvement efforts. R&DCTE Review, 2(3), 1-2,5.

Huling-Austin, L. (1984). Collecting data in high schools: Methods and madness (R&D Report #3183). This paper was presented at the annual meeting of the American Educational Research Association, New Orleans.

Huling, L. L., Hall, G. E., Hord, S. M. & Rutherford, W. L. (1983). A multidimensional approach for assessing implementation success (R&D Report #3157). Austin: Research and Development Center for Teacher Education, The University of Texas at Austin.

Huling-Austin, L., Stiegelbauer, S. M. & Muscella, D. (1985). High school principals: Their role in guiding change (R&D Report #3205). This paper was presented at the annual meeting of the American Educational Research Association, Chicago.

Kanter, R. M. (1984). Change Masters. New York: Simon and Schuster.

Loucks, S. F., Newlove, B. W. & Hall, G. E. (1976). Measuring levels of use of the innovation: A manual for trainers, interviews, and raters (R&D Report #3013). Austin: Research and Development Center for Teacher Education, The University of Texas at Austin.

Rutherford, W. L., Hord, S. M., Huling-Austin, L., Stiegelbauer, S. M., Murphy, S. C., Putman, S., Hall, G. E. & Muscella, D. (1985). Changing the American high school: Descriptions and prescriptions (R&D Report #3216). This symposium was presented at the annual meeting of the American Educational Research Association, Chicago.

Rutherford, W. L. & Huling-Austin, L. (1984). Changes in high school: What is happening - what is wanted? (R&D Report #3184). This paper was presented at the annual meeting of the American Educational Research Association, New Orleans.

Rutherford, W. L. & Murphy, S. C. (1985). Change in high schools: Roles and reactions of teachers (R&D Report #3211). This paper was presented at the annual meeting of the American Educational Research Association, Chicago.

Stiegelbauer, S. M. (1984). Community, context, and co-curriculum: Situational factors influencing school improvement in a study of high schools. (R&D Report #3186). This paper was presented at the annual meeting of the American Educational Research Association, New Orleans.

Stiegelbauer, S. M. (1984). More effective leadership for change: Some findings from the Principal Teacher Interaction (PTI) Study (R&D Report #3207). Austin: Research and Development Center for Teacher Education, The University of Texas at Austin.

Stiegelbauer, S. M., Goldstein, M. & Huling, L. L. (1982). Through the eye of the beholder: On the use of qualitative methods in data analysis (R&D Report #3137). This paper was presented at the annual meeting of the American Educational Research Association, New York.

Stiegelbauer, S. M., Haddad, M. & Murphy, S. C. (1985). Adding it all up: A checklist approach to determining the influences of situational variables (R&D Report #3209). This paper was presented at the annual meeting of the American Educational Research Association, Chicago.